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<110> Minion, F. Chris
Djordjevic, Steven P.

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Polypeptides

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<213> Mycoplasma hyopneumoniae

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<213> Mycoplasma hyopneumoniae

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<213> *Mycoplasma hyopneumoniae*

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Pro Lys Ser Ser Glu Phe Thr Asp Phe Val Ser Lys Phe Asp Phe Leu
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Thr Asn Asn Gly Arg Thr Val Leu Glu Ile Pro Lys Lys Tyr Gln Val
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<211> 1001

<212> PRT

<213> Mycoplasma hyopneumoniae

<400> 10

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His	Tyr	Thr	Tyr	Asn	Phe	Asp	Phe	Asp	Tyr	Asp	Ala	Thr	Gln	Glu	Ile		
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Asn	Lys	Pro	Leu	Glu	Leu	Lys	Gly	Ile	Thr	Lys	Lys	Met	Ser	Pro	Leu		
			485					490					495				
Phe	Asp	Phe	Leu	Asn	Phe	Ser	Thr	Ser	Lys	Asn	Glu	Lys	Leu	Glu	Thr		
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Lys	Met	Ala	Pro	Pro	Asn	Ala	Lys	Met	Gln	Asn	Val	Gly	Ala	Ile	Leu		
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Phe	Asn	Glu	Glu	Val	Lys	Gln	Gln	Glu	Ser	Gln	Val	Lys	Asp	Gln	Ala		
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Gly	Gly	Thr	Tyr	Leu	Ser	Lys	Leu	Phe	Glu	Asn	Leu	Glu	Lys	Thr	Ser		
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Phe	Pro	Thr	Asn	Thr	Leu	Leu	Tyr	Leu	Ser	Thr	Phe	Tyr	Arg	Asp	Lys		
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Phe	Ile	Leu	Lys	Leu	Glu	Leu	Lys	Ala	Glu	Gly	Ile	Thr	Lys	Glu	Thr		
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Ala	Leu	Val	Gln	Ser	Thr	Asn	Thr	Asp	Leu	Phe	Leu	Asp	Trp	Arg	Ser		
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Ser Ile	Ser Ala Leu Asn Asn Pro Asn Leu Lys Phe Lys Val Asn Pro				
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Glu Pro	Ser Asn Lys Ser Gln Gln Lys Val His Leu Asp Gln Ala Gly				
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Ile Tyr	Leu Ala Glu Gly Gly Ile Ser Leu Glu Asn Leu Ser Gln Glu				
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Gln Ala	Lys Asn Leu Lys Leu Asp Glu Gly Lys Thr Ile Phe Tyr Ala				
	725		730		735
Phe Lys	Pro Thr Lys Leu Ser Arg Arg Ser Leu Leu Arg Tyr Phe Leu				
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Leu Ser	Ala Ser Asp Asn Ser Ser Ser Lys Phe Ser Leu Leu Ile Glu				
	755		760		765
Pro Glu	Ile Leu Leu Thr Gly Phe Asn Lys Ile Gly Ala Asp Phe Glu				
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Lys Val	Glu Gln Asn Asn Lys Asn Gln Leu Lys Trp Thr Asp Ala Ser				
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Gly Gly	Leu Gln Lys Thr Phe Asn Gly Thr Tyr Gln Asp Ile Tyr Tyr				
	805		810		815
Phe Leu	Leu Gln Leu Leu Gln His Asn Lys Val Ala Leu Tyr Pro Lys				
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Asn Gln	Ser Asp Lys Ser His Asp Phe Leu Asn Ala Pro Ala Ala Thr				
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Met Val	Leu Val Ala Thr Val Glu Ser Glu Asn Thr Glu Lys Tyr Leu				
	850		855		860
Lys Met	Lys Leu Phe Ser Ser Asp Tyr Gln Asn Gly Lys Lys Glu Ile				
865		870		875	880
Phe Thr	Trp Lys Thr Lys Ile Glu Ser Gln Phe Gln Asn Leu Asp Leu				
	885		890		895
Ala Lys	Asn Leu Thr Leu Gly Thr Thr Lys Ser Asn Asn Gln Glu Asn				
	900		905		910
Ile Asp	Lys Glu Gln Gln Asp Asp Ser Arg Lys Pro Thr Gly Ile Thr				
	915		920		925
Leu Lys	Gly Phe Ala Leu Phe Asp Lys Pro Lys Asp Asn Gln Lys Tyr				
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Asn Asn	Ile Leu Glu Lys Phe Leu Ser Glu Tyr Met Glu				
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<210> 13

<211> 2835

<212> DNA

<213> Mycoplasma hyopneumoniae

<400> 13

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cgggcttttg	aattttcaag	tttagaaact	aacaactatc	aaattagttt	tgatttagaa	360
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gatcaagtaa	catattcaaa	acaaattgaa	cttaaagggt	ttgctcaaga	tgatgaagct	480
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<210> 14

<211> 945

<212> PRT

<213> *Mycoplasma hyopneumoniae*

<400> 14

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Gly Ile Asn Ser Tyr Asn Lys Ser Tyr Tyr Ser Tyr Leu Asn Glu Asn
      35              40              45
Pro Ser Gln Leu Lys Thr Thr Lys Thr Thr Lys Ile Ser Gln Gln Asp

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Phe Asp Lys Ile Val	Ser Asn Leu Lys Ile	Arg Asp Asn Phe Lys Lys		
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Ile Ser Ala Lys Thr	Ala Leu Ser Ala Val	Lys Asn Asp Leu Tyr Arg		
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Tyr Asp Leu Val Arg	Ala Phe Glu Phe Ser	Ser Leu Glu Thr Asn Asn		
	100	105		110
Tyr Gln Ile Ser Phe	Asp Leu Glu Asn Ala	Val Val Asp Gln Asn Ser		
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Ile Lys Asn Val Leu	Val Phe Ala Lys Ser	Glu Lys Asp Gln Val Thr		
	130	135		140
Tyr Ser Lys Gln Ile	Glu Leu Lys Gly Phe	Ala Gln Asp Asp Glu Ala		
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Ala Gly Asp Leu Val	Lys Phe Gln Ile Asp	Gln Arg Lys Ser Phe Val		
	165	170		175
Asn Leu Tyr Lys Phe	Asp Tyr Ser Phe Ser	Glu Phe Gln Arg Ile Leu		
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Ser Glu Asn Tyr Arg	Gln Ile Arg Asn Thr	Asn Ser Phe Thr Arg Leu		
	195	200		205
Ala Asn Ala Leu Ile	Ser Ser Lys Ala Ser	Leu Ser Leu Tyr Asn Ser		
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Leu Gly Gln Pro Val	Phe Leu Asp Glu Asn	Tyr Arg Leu Glu Pro Val		
225	230	235		240
Leu Asn Ser Lys Lys	Glu Leu Asn Leu Leu	Glu Lys Asn Lys Lys Leu		
	245	250		255
Tyr Leu Glu Leu Asn	Leu Val Glu Lys Glu	Ser Gln Lys Lys Ile Asn		
	260	265		270
Leu Thr Leu Glu Ile	Arg Pro Leu Leu Thr	Asn Gln Glu Phe Thr Ser		
	275	280		285
Glu Leu Lys Thr Leu	Phe Glu Ser Asn Leu	Asp Gln Asn Leu Ser Leu		
	290	295		300
Asn Leu Glu Leu Lys	Asn Ala Leu Phe His	Asp Arg Thr Ser Phe Ser		
305	310	315		320
Glu Tyr Leu Tyr Gly	Ser Pro Gln Gln Arg	Thr Lys Thr Asp Glu Val		
	325	330		335
Lys Gln Lys Ala Lys	Glu Leu Lys Asp Leu	Phe Gly Phe Arg Ser Ala		
	340	345		350
Lys Phe Trp Gln Asp	Thr Lys Phe Gly Thr	Phe Tyr Val Ile Ile Lys		
	355	360		365
Pro Gln Leu Leu Asp	Pro Ala Lys Ile Ser	Gln Glu Asp Lys Lys Lys		
	370	375		380
Leu Leu Ala Asp Lys	Lys Ile Arg Phe Glu	Val Leu Thr Thr Leu Lys		
385	390	395		400
Arg Lys Ala Leu Asp	Gln Gln Asp Val Leu	Thr Asp Leu Pro Val Leu		
	405	410		415
Val Asp Leu Ser Leu	Asp Ser Asn Lys Tyr	Glu Thr Ala Ile Ser Gln		
	420	425		430
Ile Phe Asn Ser Thr	Lys Thr Thr Lys Glu	Phe Lys Met Gln Glu Tyr		
	435	440		445
Glu Asp Arg Ala Lys	Leu Ser Thr Lys Glu	Ile Lys Glu Thr Ile Asp		
	450	455		460
Lys Leu Ala Asn Leu	Ala Ala Lys Val Ser	Asn Leu Ser Glu Pro Ser		

465					470					475				480
Asp	Glu	Val	Val	Arg	Ala	Val	Tyr	Leu	Leu	Asn	Thr	Gly	Lys	Tyr
				485					490					495
Phe	Asp	Asp	Glu	Ile	Gln	Gln	Glu	Lys	Thr	Asn	Leu	Lys	Lys	Ile
			500					505					510	
Glu	Gln	Ala	Arg	Met	Lys	Ala	Asp	Thr	Lys	Asn	Leu	Ala	Pro	Lys
			515				520					525		Val
Pro	Ser	Pro	Ile	Gln	Lys	Pro	Thr	Thr	Ser	Ala	Thr	Ser	Ser	Gly
			530			535					540			Thr
Thr	Lys	Thr	Ser	Thr	Gly	Thr	Glu	Lys	Lys	Val	Ser	Val	Ser	Ala
545					550					555				560
Ser	Asp	Ile	Ile	Ser	Met	Lys	Asn	Gln	Pro	Glu	Gln	Thr	Thr	Lys
				565				570						575
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Ser	Gln	Asn	Ser	Gly	Gln	Asn	Ser	Ile	Thr	Leu	Glu	Glu	Lys	Phe
		595					600					605		Gly
His	Thr	Ile	Trp	Lys	Leu	Leu	Asn	Thr	Ser	Gln	Ile	Tyr	Asn	Phe
		610				615				620				Glu
Asn	Thr	Gln	Gly	Gln	Tyr	Thr	Ile	Ser	Ile	Glu	Asp	Asp	Lys	Leu
625					630					635				640
Phe	Asp	Phe	Lys	Leu	Val	Ser	Lys	Ala	Asp	Arg	Ala	Ile	Ile	Tyr
				645				650						655
Gly	Ser	Lys	Ile	Ser	Leu	Gly	Gly	Leu	Ile	Asn	Ser	Asp	Lys	Ser
			660					665				670		Ala
Tyr	Asp	Glu	Ile	Lys	Gln	Phe	Ser	Pro	Asp	Leu	Phe	Leu	Asp	Ala
		675					680					685		Thr
Ile	Gly	Glu	Gln	Ser	Asp	Tyr	Lys	Asn	Lys	Gln	Lys	Lys	Asp	Tyr
	690					695				700				Thr
Leu	Lys	Ser	Leu	Arg	Asp	Leu	Met	Gly	Asn	Gly	Phe	Val	Tyr	Lys
705					710					715				720
Glu	Thr	Lys	Ser	Asn	Pro	Gln	Glu	Asn	Val	Leu	Lys	Leu	Gln	Thr
				725				730						735
Ser	Glu	Gln	Lys	Lys	Pro	Leu	Pro	Gly	Leu	Arg	Ser	Gly	Leu	Ile
			740					745				750		Tyr
Ile	Ala	Phe	Thr	Val	Asn	Asn	Ile	Asn	Lys	Asn	Asp	Tyr	Lys	Pro
		755					760					765		His
Tyr	Leu	Ile	Arg	Asp	Lys	Asn	Asp	Lys	Gly	Val	Phe	Ile	Gln	Arg
	770					775					780			Tyr
Gln	Asp	Lys	Glu	Glu	Pro	Asn	Ala	Phe	Glu	Ile	Arg	Ile	Asp	Ser
785					790					795				800
Glu	Pro	Asp	Asp	Phe	Arg	Asp	Lys	Gln	Phe	Gln	Ala	Ala	Asp	Thr
				805				810						815
Leu	Asp	Ala	Ser	Gly	Ser	Ile	Asp	Pro	Arg	Ser	Lys	Lys	Lys	Ile
			820				825					830		Ile
Leu	Arg	Gln	Asn	Ala	Asp	Tyr	Leu	Leu	Val	Val	Tyr	Lys	Ser	Lys
		835					840					845		Lys
Asp	Ile	Val	Thr	Glu	Leu	Tyr	Ser	Leu	Pro	Ser	Ala	Gln	Asp	Asn
	850					855					860			Asn
Lys	Glu	Lys	Ile	Val	Lys	Ile	Lys	Asn	Arg	Lys	Ser	Phe	Pro	Ser
865					870					875				880
Gly	Tyr	Thr	Val	Gln	Gly	Ser	Leu	Leu	Tyr	Ser	Leu	Phe	Ser	Pro

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Lys Ile Gly Asp Ser Gln Lys Pro Ala Gln Gln Pro Pro Ala Val Ser
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Ile Lys Ala Ile Ala Leu Phe Asp Lys Lys Ser Phe Thr Asn Asp Thr
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Gln
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<210> 15

<211> 1380

<212> DNA

<213> Mycoplasma hyopneumoniae

<400> 15

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gcaccagtaa cattcaaagc gtttatgatg tcaaatagata aaaatctagt atttgatca     1320
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<210> 16

<211> 460

<212> PRT

<213> Mycoplasma hyopneumoniae

<400> 16

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Thr Glu Asn Ser Ala Lys Thr Val Lys Val Ser Thr Phe Ala Glu Glu
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Ala Lys Gly Gln Ser Gln Ser Gln Gln Thr Gln Pro Val Ser Thr Ser
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Phe	Asn	Phe	Ala	Asn	Ile	Tyr	Asn	Leu	Glu	Asn	Thr	Lys	Ser	Glu	Tyr	100	105	110	
Glu	Ile	Ser	Thr	Leu	Gly	Asn	Lys	Leu	Phe	Phe	Asp	Phe	Lys	Leu	Val	115	120	125	
Asp	Lys	Thr	Asn	Gln	Asn	Leu	Ile	Leu	Ala	Gln	Ser	Lys	Ile	Ser	Leu	130	135	140	
Asn	Asn	Ile	Ile	Asn	Ser	Asn	Lys	Ser	Ala	Tyr	Asp	Ile	Ile	Lys	Lys	145	150	155	160
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Gly	Lys	Asp	Lys	Lys	Glu	Phe	Ile	Leu	Lys	Asp	Leu	Ser	Asp	Asn	Lys	180	185	190	
Leu	Ile	Phe	Lys	Ser	Glu	Asp	Ala	Ile	Gln	Thr	Asp	Gln	Gly	Leu	Glu	195	200	205	
Leu	Lys	Lys	Pro	Leu	Lys	Leu	Ser	Pro	Thr	Thr	Asn	Ser	Ser	Ser	Thr	210	215	220	
Thr	Ser	Gln	Lys	Thr	Asn	Lys	Lys	Asp	Asp	Ile	Gly	Val	Phe	Trp	Leu	225	230	235	240
Ala	Leu	Gln	Val	Asn	Asn	Ile	Thr	Asp	Phe	Lys	Asn	His	His	Leu	Ile	245	250	255	
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Asn	Asn	Phe	Ile	Thr	Asp	Ile	Val	Asp	Leu	Val	Asp	Gly	Phe	Ile	Lys	290	295	300	
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Thr	Pro	Ser	Leu	Leu	Ile	Asp	Phe	Asn	Lys	Tyr	Lys	Asn	Lys	Lys	Asn	325	330	335	
Thr	Glu	Phe	Ile	Lys	Ala	Asn	Thr	Lys	Ile	Leu	Leu	Glu	Val	Val	Glu	340	345	350	
Asn	Asn	Asp	Arg	Leu	Ser	Val	Ser	Val	Phe	Ser	Ser	Gln	Ala	Gly	Lys	355	360	365	
Asn	His	Lys	Gln	Ile	Ile	Glu	Asn	Arg	Met	His	Arg	Ser	Leu	His	Tyr	370	375	380	
Lys	Lys	Ala	Asp	Lys	Ala	Lys	Glu	Gly	Val	Ser	Pro	Ile	Pro	Ser	Phe	385	390	395	400
Thr	Asp	Ile	Leu	Asn	Glu	Leu	Gln	Ile	Gly	Ala	Thr	Asp	Ser	Asp	Pro	405	410	415	
Lys	Thr	Gln	Lys	Ala	Pro	Val	Thr	Phe	Lys	Ala	Phe	Met	Met	Ser	Asn	420	425	430	
Asp	Lys	Asn	Leu	Val	Phe	Gly	Ser	Asn	Ile	Asn	Asn	Gln	Glu	Ile	Arg	435	440	445	
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<211> 1353

<212> DNA

<213> Mycoplasma hyopneumoniae

<400> 17

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<210> 18

<211> 451

<212> PRT

<213> Mycoplasma hyopneumoniae

<400> 18

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<210> 19

<211> 5637

<212> DNA

<213> Mycoplasma hyopneumoniae

<400> 19

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<210> 20

<211> 1878

<212> PRT

<213> Mycoplasma hyopneumoniae

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Glu	Phe	Gly	Leu	Pro	Leu	Phe	Leu	Pro	Lys	Glu	Leu	Arg	Lys	Asn	Ser	
		755					760					765				
Ser	Asn	Ile	Gly	Ser	Ser	Gln	Asn	Ser	Asn	Ser	Pro	Trp	Glu	Gln	Glu	
		770					775					780				
Ile	Ile	Ser	Gln	Phe	Lys	Asp	Gln	Asn	Leu	Ser	Asn	Gln	Asp	Gln	Leu	
785					790					795					800	
Ala	Gln	Phe	Ser	Thr	Lys	Ile	Trp	Glu	Lys	Ile	Ile	Gly	Asp	Glu	Asn	
				805					810					815		
Glu	Phe	Asp	Gln	Asn	Asn	Arg	Leu	Gln	Tyr	Lys	Leu	Leu	Lys	Asp	Leu	
			820					825					830			
Gln	Glu	Ser	Trp	Ile	Asn	Lys	Thr	Arg	Asp	Asn	Leu	Tyr	Trp	Thr	Tyr	
			835					840					845			
Leu	Gly	Asp	Lys	Leu	Lys	Val	Lys	Pro	Lys	Asn	Asn	Leu	Asp	Ala	Lys	
		850					855					860				
Phe	Arg	Gln	Ile	Ser	Asn	Leu	Gln	Glu	Leu	Leu	Thr	Ala	Phe	Tyr	Thr	
865					870					875					880	
Ser	Ala	Ala	Leu	Ser	Asn	Asn	Trp	Asn	Tyr	Gln	Asp	Ser	Gly	Ala		
			885					890					895			
Lys	Ser	Thr	Ile	Phe	Glu	Glu	Ile	Ala	Glu	Leu	Asp	Pro	Lys	Val		
			900					905					910			

			915					920					925			
Ile	Gly	Phe	Asp	Asp	Asn	Ala	Gly	Lys	Phe	Asn	Gln	Glu	Val	Ile	Arg	
	930					935					940					
Ser	Ser	Ser	Arg	Thr	Ile	Tyr	Leu	Lys	Thr	Ser	Gly	Lys	Ser	Lys	Leu	
945					950					955					960	
Glu	Ala	Asp	Thr	Ile	Asp	Gln	Leu	Asn	Gln	Ala	Val	Glu	Asn	Ala	Pro	
				965					970					975		
Leu	Gly	Leu	Gln	Ser	Phe	Tyr	Leu	Asp	Thr	Glu	Arg	Phe	Gly	Val	Phe	
			980					985				990				
Gln	Lys	Leu	Ala	Thr	Ser	Leu	Ala	Val	Gln	His	Lys	Gln	Lys	Glu	Lys	
		995				1000					1005					
Pro	Leu	Pro	Lys	Lys	Leu	Asn	Asn	Asp	Gly	Tyr	Thr	Leu	Ile	His	Asp	
	1010					1015					1020					
Lys	Leu	Lys	Lys	Pro	Val	Ile	Pro	Gln	Ile	Ser	Ser	Ser	Pro	Glu	Lys	
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Asp	Trp	Phe	Glu	Gly	Lys	Leu	Asn	Gln	Asn	Gly	Gln	Ser	Gln	Asn	Val	
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Asn	Val	Ser	Thr	Phe	Gly	Ser	Ile	Ile	Glu	Ser	Pro	Tyr	Phe	Ser	Thr	
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		1075					1080					1085				
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	1090					1095					1100					
Gln	Lys	Leu	Ala	Ile	Leu	Leu	Gly	Asn	Gln	Phe	Ile	Gln	Tyr	Tyr	Gln	
1105					1110					1115					1120	
Gln	Asn	Asp	Lys	Glu	Ile	Glu	Phe	Glu	Ile	Ile	Asn	Val	Glu	Lys	Val	
			1125					1130						1135		
Ser	Glu	Leu	Ser	Phe	Arg	Val	Glu	Phe	Lys	Leu	Ala	Lys	Thr	Leu	Glu	
			1140					1145					1150			
Asp	Asn	Gly	Lys	Thr	Ile	Arg	Val	Leu	Ser	Asp	Glu	Thr	Met	Ser	Leu	
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	1170					1175					1180					
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1185					1190					1195					1200	
Leu	Ala	Ala	Lys	Thr	Lys	Phe	Val	Leu	Lys	Phe	Lys	Asp	Gln	Ile	Pro	
			1205					1210						1215		
Val	Asp	Ala	Ser	Gly	Asn	Ile	Ser	Asp	Lys	Trp	Leu	Ala	Ser	Ile	Pro	
		1220						1225				1230				
Leu	Val	Ile	His	Gln	Gln	Met	Leu	Arg	Leu	Ser	Pro	Val	Val	Lys	Thr	
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Ile	Arg	Glu	Leu	Gly	Leu	Lys										

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Thr Phe Ala Asp Tyr Asn Pro Phe Phe Tyr Phe Asn Glu Asp Trp Arg		
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Asn Ile Asp Lys Tyr Leu Asn Asn Lys Gly Asn Val Ser Ser Gln Gln		1360
1365	1370	1375
Gln Gln Gln Gln Gln Gln Gln Pro Gly Gly Gly Asn Gln Gly Ser Gly		
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Leu Ile Gln Arg Leu Asn Lys Asn Ile Lys Pro Glu Thr Phe Thr Pro		
1395	1400	1405
Ala Leu Ile Ala Leu Lys Arg Asp Asn Asn Thr Asn Leu Ser Asn Tyr		
1410	1415	1420
Ser Asp Lys Ile Ile Met Ile Lys Pro Lys Tyr Leu Val Glu Arg Ser		
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Ile Gly Val Pro Trp Ser Thr Gly Leu Asp Gly Tyr Ile Gly Ser Glu		1440
1445	1450	1455
Gln Leu Lys Gly Gly Thr Ser Ser Asn Gly Gln Lys Arg Phe Lys Gln		
1460	1465	1470
Asp Phe Ile Gln Ala Leu Gly Leu Lys Asn Thr Glu Tyr His Gly Lys		
1475	1480	1485
Leu Gly Leu Ser Ile Arg Ile Phe Asp Pro Gly Asn Glu Leu Ala Lys		
1490	1495	1500
Ile Lys Asp Ala Ser Asn Lys Lys Gly Glu Glu Lys Leu Leu Lys Ser		
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Tyr Asp Leu Phe Lys Asn Tyr Leu Asn Glu Tyr Glu Lys Lys Ser Pro		1520
1525	1530	1535
Lys Ile Ala Lys Gly Trp Thr Asn Ile His Pro Asp Gln Lys Glu Tyr		
1540	1545	1550
Pro Asn Pro Asn Gln Lys Leu Pro Glu Asn Tyr Leu Asn Leu Val Leu		
1555	1560	1565
Asn Gln Pro Trp Lys Val Thr Leu Tyr Asn Ser Ser Asp Phe Ile Thr		
1570	1575	1580
Asn Leu Phe Val Glu Pro Glu Gly Ser Asp Arg Gly Ser Gly Ala Lys		
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Leu Lys Gln Val Ile Gln Lys Gln Val Asn Asn Asn Tyr Ala Asp Trp		1600
1605	1610	1615
Gly Ser Ala Tyr Leu Thr Phe Trp Tyr Asp Lys Asp Ile Ile Thr Asn		
1620	1625	1630
Gln Pro Asn Val Ile Thr Ala Asn Ile Ala Asp Val Phe Ile Lys Asp		
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Val Lys Glu Leu Glu Asp Asn Thr Lys Leu Ile Ala Pro Asn Ile Thr		
1650	1655	1660
Gln Trp Trp Pro Asn Ile Ser Gly Ser Lys Glu Lys Phe Tyr Lys Pro		
1665	1670	1675
Thr Val Phe Phe Gly Asn Trp Glu Asn Glu Asn Ser Asn Met Asn Ser		
1685	1690	1695
Gln Gly Gln Thr Pro Thr Trp Glu Lys Ile Arg Glu Gly Phe Ala Leu		
1700	1705	1710
Gln Ala Leu Lys Ser Ser Phe Asp Gln Lys Thr Arg Thr Phe Val Leu		
1715	1720	1725
Thr Thr Asn Ala Pro Leu Pro Leu Trp Lys Tyr Gly Pro Leu Gly Phe		
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Gln Asn Gly Pro Asn Phe Lys Thr Gln Asp Trp Arg Leu Val Phe Gln		

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1745          1750          1755          1760
Asn Asp Asp Asn Gln Ile Ala Ala Leu Arg Val Gln Glu Gln Asp Arg
          1765          1770          1775
Pro Glu Lys Ser Ser Glu Asp Lys Asp Lys Gln Lys Trp Ile Lys Phe
          1780          1785          1790
Lys Val Val Ile Pro Glu Glu Met Phe Asn Ser Gly Asn Ile Arg Phe
          1795          1800          1805
Val Gly Val Met Gln Ile Gln Gly Pro Asn Thr Leu Trp Leu Pro Val
          1810          1815          1820
Ile Asn Ser Ser Val Ile Tyr Asp Phe Tyr Arg Gly Thr Gly Asp Ser
1825          1830          1835          1840
Asn Asp Val Ala Asn Leu Asn Val Ala Pro Trp Gln Val Lys Thr Ile
          1845          1850          1855
Ala Phe Thr Asn Asn Ala Phe Asn Asn Val Phe Lys Glu Phe Asn Ile
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38

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36

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